

432 MHz AND ABOVE EME NEWS

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CONDITIONS

There are not a lot of reports this month as a result of the Paris Conference. Many of the regulars were still traveling, as myself, at the time of the SW. There were some who did make it back and came on with renewed enthusiasm generated by the conference. The real action will start in Sept. KA0RYT will be putting NB on 70 cm EME during the SW - see the announcement below. The Sept SW coincides with the ARRL's Fall VHF Contest. This contest counts EME QSOs for points. With the premium Moon weekend you can expect many contest stations trying to increase their scores with EME generated section multipliers (grid squares). The contest runs from 12 Sept at 1800 to 14 Sept at 0300. The contest exchange is your 4 character grid (for example FN20). Scoring is the sum of QSO points x grid squares for each band operated. QSOs are given increasing value for the higher bands (QSOs on 144 1, 432 2, 1296, and 2300 and higher 4). The Sept SW also offers a good warm up for the ARRL EME Contest (10/11 Oct and 5/6 Dec). I just learned that the Italian EME Contest is also on 12/13 Sept, but have no other details.

PARIS Conference Report

The 8th International 432 and UP EME Conference is now history. 80 OM's and 40 XYL's attended and all agreed that the conference organizers did a great job. Our thanks to Jean Jacques F1EHN, Herve F5HRY, Olivier F5MZN and William F6DLA. The conference started on Friday evening with a cruise up the Sien to see Pairs by moonlight for the XYL's. While this was taking place the OM's gathered and heard talks by F6DLA on early radio and the Eiffel tower, by EA3DXU on the EA9 dxpedition, by CT1DMK on his HB 1 kW TWTA power supply, and by G3LTF on the 13 cm frequency allocation problem. Peter feels that we should all move to the one internationally common frequency sub-band around 2400 MHz. Despite the pain for some, I feel Peter's plan really makes sense. After the talks there was an EME flea market with stuff you could not find any place else. There should be some new BIG [DL9KR style] signals as a result. Saturday was filled with talks by CT1DMK on EME and radio astronomy, by K2UYH on the hi= story of the EME NL - and on the form I would like to see reports submitted, by S57UUU on 10 GHz preamp design, by DLWU on boom effects in yagi design, by OE5JFL on his stand alone dish controller, by HB9BBD on the installation of his new 10 m dish - it was worth coming just to see how Dom moved his dish around with a helicopter, by S57UUU on TWTA power supply design, by WA7CJO on how to make Ku-band TWTAs work at 24 GHz, by G3SEK on polarization alignment problems, by K2UYH on SETI using EME stations, and finally by PY5ZBU on the attractions of Rio de Janeiro as a future conference site - there are a lot of attractive women there. The XYL's were off touring Paris -- Louvre, Grand Magasins, Eiffel Tower... The day ended with a marathon banquet and tombola (raffle) with lots of great prizes. I won a TH308, but it was actually G4RGK's ticket. People were partying on the ample supply of official EME Conference Champagne until the wee hours of the morning. The next day we were all off for the Nancay Radio Astronomy Observatory. Although the trip was 2 hours long, it was planned out very well and worth the time. On the bus we received a lecture on Nancay by Francois Biraud, one of the observatory's senior staff. There were also videos on F3VS's huge 2 m EME array and the TM8EME tests. On the way back we stopped for lunch in away only the French can do... There was at least 8 courses with 4 or 5 different types of vin - but who counts. During our extended lunch G3SEK lead a discussion on operating procedure, contests, etc. There seemed to be interest in separate SWs for 13 cm and above. With regard to a new Microwave EME contest being considered by the ARRL, there was just about unanimous agreement that such a contest should begin

at 13 cm and not include 1296. Proposals for the next conference location were considered, and it was decided to give Don, PY5ZBU the green light for EME Brazil 2000 in Rio! Many of the attendees stayed around for a late dinner, in a very friendly atmosphere, listening to Nadine and Ian's music, and drinking some special "chouchen" brought from Brittany by F5PAU.

[Picture Gallery EME98](#)

KA0RYT/0 NEBRASKA Dexpedition

Ron is going to NB (EN02, SE corner near Nelieh, NB) for the ARRL VHF Contest Weekend (also the Sept SW). He plans to mount a serious EME dexpedition with 4 long FO yagis and 1.5 kW. There will be both skeds and random activity. Skeds are listed at the end of this NL. Operation will begin on 12 Sept at moonrise 0600 and end at moonset 1700. Skeds will be normal sequence (2.5 min), and random will be just that. KA0RYT/0 will TX on 432.035. All sked stations should transmit on .037. Random calls should be around .033 - they will tune from just below 432.035 down to .030 (but not on .035).

[AD6GD](#)

Paul (SM0PYP) has passed the US's extra class license exam and has a new US call AD6GD. Paul notes that his SM0PYP call is still valid in most Eur countries. He is still not QRV, but hope to be on 10 GHz for the ARRL EME Contest.

[DF4PV](#)

Guenter is now QRV on 23 cm and but not QRV any more on 70 cm -- so no 432 skeds please. He worked in Aug on 1296 F5PAU, OZ6OL, K9BCT, OH2DG, K5JL, OE5JFL, F1ANH, KD4LT and HB9BBD on SSB. He experienced some strange propagation and evidence of Faraday rotation because of a magnetic storm. On 27 Aug (A3D112) echoes were unstable and sometimes very weak. On 30 Aug at 1700 echoes were very weak and disappeared completely from 1800 until 1915. Then echoes came slowly back. A view in the "Solar Terestr. Activity Report" shows that "M-Flare peaked at 1810". Guenter has an homepage at:

[Guenter, DF4PV](#)

[G3LTF](#)

Peter writes about the conference -- We really enjoyed seeing a lot of old friends again. Herve and his team did a fine job. As I spent a lot of the 70's working on scanning antennas of one sort or another the visit to Nancay was particularly interesting. I missed some reports earlier in the year so to catch up... I worked on 30 May on 432 K7XD for initial #329 and on 1296 worked N6BQ, PY5ZBU, K2UYH and DF3RU, missed the June SW, in July on 432 OE5EYM, W7CNK #330, I5CTE, DL4KG, KA0RYT, GW3XYW and KL7HFQ #331, and in Aug on 432 I5CTE and N7LQ #332, and on 1296 N6BQ, W2UHI, LA8LE, OH2DG, HA5SHF for initial #139, OZ6OL #140, KB2AH, K5JL, ZS6AXT,

SM2CEW and ON5RR. Activity on 1296 was good with HB9BBD and OZ4MM very good SSB copy. The 432 condx have had extreme Faraday this summer. It is unusual for me not to hear ANY echoes at all until I rotate the pol 90 degs (which I can do in 2 seconds). This has been so on every daylight session. I wonder if this is due to the increase in solar activity. I think it makes for lower activity.

HA5SHF

Csaba (HA5BGL) send his group's Aug SW results. They QSO'd on 1296 on 15 Aug LA8LF (O/O), OE5JFL (559/549), K5JL (569/549) on random and W2UHI (449/439) on random, and on 16 Aug HB9BBD (569/529), ZS6AXT (O/O) and G3LTF (O/O). All QSOs were on random except LA8LF. This time they tested a new circular feed (not 100% OK) which they expect to have in use next time. In Oct they hope to have a new TH308 PA at about 400 w going.

HB9BBD

Dominique writes -- The 98 EME Conference in Paris was a very nice gathering. My wife enjoyed the ladies program very much. Thanks to our French friends! Back home my log on 1296 looks as follows: Worked on 15 Aug at 2330 JH5LUZ (569/589), on 16 Aug at 0600 ZS6AXT (569/589), 0615 HA5SHF (529/569) - Csabas' signal jumped several times down about 500 Hz, 0657 ON5RR (559/579), 0714 OH2DG (559/579), 0727 OZ4MM (589/589) and on SSB (57/56), 0753 ON5RR (55/56) on SSB, 0809 GW3XYW (569/569), 0818 LA8LF (579/589) and on SSB (57/57), 0836 KB2AH on SSB (58/59) and 0948 K5JL (599/589) and on SSB (59/59), and on 23 AUG at 1146 SM2CEW (559/579), 1250 SM2CEW (559/57) - one-way SSB, 1314 KD4LT (559/569) and (55/58) on SSB, 1322 LA8LF (57/58) on SSB, 1330 DF4PV (53/58) on SSB, 1417 K5JL (57/59) on SSB and 1424 HB9BHU (54/55) on SSB. In the morning of 23 Aug I measured the heading of the 10m dish with the Sun, and found a mis-heading of 0.2 deg in the AZ which when corrected, the Sun noise improved by 1 dB. Sun noise went just above 22 dB today.

KD4LT

Scott had a wonderful time at the Paris Conference. He sends a very special thanks to the Paris organizational crew for a very good meeting 2E Upon his return, Scott did a few modifications to his 23 cm HPA and is now QRV at near the 1 kW level on 23 cm. After a total re-calibration of the tracking system on the 6.7 m 23 cm dish, after having the tracking box in Paris for show, everything was ready for the SW. The new station worked on 1296 was W6HD (O/O) for initial #47. Other QSOs were DJ9YW, K5JL, N2IQU (SSB QSO with his six year old daughter), F2TU, W2UHI, N6BQ, LA8LF and others. Scott has started working on getting the 70 cm system functional again and plans to be QRV on both 23 and 70 cm during the next SW. Scott returned from Paris with the TM8EME QSLs for all US stations that were not at the conference. All have now been mailed except WA9FWD and W4OP for which Scott needs to get addresses. EME Totals for KD4LT are on 70 cm Initial #311, WAS 36 and DXCC 47, and on 23 cm Initial #47, WAS 13 and DXCC 23.

LU6DW

Marc, LU8EDR and LU4DHD have worked OE9ERC, OE9XXI, OZ4MM and LA8LF on

1296 thus far. They have only 60 w into a 3.6 m dish, but are working on a higher power amp. Marc will be attending the Microwave Update Conference in CO in Oct, and will also be in the NJ area. By the time he returns he will have a much boosted signal. They are interested in skeds with stations in NA for the Sept SW, due to moon position and local time. Their WEB page is still:

[Marc, LU8EDR WEB Page](#)

and their email is: [Marc, LU8EBR](#)

N6BQ

Hoppy's Aug 23 cm EME activity report follows -- I worked 02 Aug W2UHI, 03 Aug W2UHI and W6HD, 04 Aug W2UHI, on 14 Aug Sun Noise was 13.9 dB= with Solar Flux of 137, on 15 Aug GW3XYW, K5JL, LA8LF, G3LTF, W2UHI and CWNR HA5SHF, and on 16 Aug - very good Condx - ZS6AXT, W2UHI, F2TU, GW3XY= W, OZ6OL, DJ9YW, OH2DG for initial #127, KD4LT, SM2CEW, ON5RR and LA8LF. HA5SHF had a good signal, but QRM prevented a QSO. Additionally, my output power on 15 Aug was only 250 w with a TH308. [Hoppy had planned to attend the Paris Conference, but health problems flared up which prevented the trip. He is very serious ill. I know he has our prayers for a recovery and would appreciate hearing from his EME friends.]

NC11

Frank reports on his Paris trip and activities -- Great to see everyone in Paris. Thanks to the entire group responsible for putting the conference together. Congratulations to all on a job well done. We had a great time despite our limited time in Paris (less than three days). We did break away from the program on Sunday to do some sightseeing and missed the Nancay trip. The trip home became a real adventure do to severe thunderstorms in the Washington DC area. We were stuck holding for 1 hour and 15 min before getting into Dullas International Airport. From that point things continued to go down hill. After several flight changes and cancellations we finally ended up driving to Washington National to try and catch a flight on a different airline. The plane was their and ready to go but they had no crew. After a long wait and just 15 minutes prior to an airport curfew a crew arrived and was greeted by loud cheers and a standing ovation. Our flight lifted off just moments before the curfew time. This all resulted in a 24 hour return trip. The following weekend I got on with renewed interest and unfortunately found activity levels to be extremely low. I got up early figuring it would be prime time for high activity, but had to call CQ for over an hour before I even heard another signal. Each time I have gotten on this summer It seemed activity has been poor. I understand of course the summer months have traditionally been the slowest, but I believe 432 activity has been on a steady decline over the last 4 years and is currently about as low as I have seen it. Based on reports in the NL and conversations at the Paris Conference, it also appears 1296 activity levels are at or near all time highs. This obviously is no coincidence. Many long time 432 ops have moved up in freq. Since I can't change the feed on my array to move bands, I will have to build a complete new system to get on a different band. I have very little 1296 equipment, but have all the components necessary to put together a very respectable 144 MHz system, so I guess I will be moving down in frequency rather than up. [I would not give up on 70 cm yet. Remember many people were not yet back from the conference or away on holiday. It is

true that 1296 activity has grown in recent years, and some of that activity has come from operators who operated on 70 cm. Most of the stations who have moved up to 1296 have remained active on 432. There also has been an influx of new stations to 432 MHz. Many have come by way of 2 m. There is no reason we can not have good activity on all the EME bands including 2 m.] Stations worked this month were on 15 Aug at 0910 **KL7HFQ (439/529)**, **0923 UT3LL (569/549)**, **0935 I5CTE (559/559)**, **0945 G3HUL (539/549)** and **0957 DL7APV (549/539)**.

OE5JFL

Hannes writes via e-mail for the 1st time -- I had a fine time at the EME conference in Paris, and want to express my thanks to the French team for the organization. After the conference I visited G4ALH for several days and enjoyed the hospitality of Rob and his family. Back home I worked on 1296 MHz on 15 Aug at 0755 **DF4PV (559/579)** for initial **#176**, **0802 K5JL (579/579)**, **0841 OZ6OL (549/559)** **#177** and **0900 HA5SHF (549/559)** **#178**. I pleased to report that the ARRL Contest Award for the 1997 EME Contest has arrived after some delay. It confirms that I am in 1st place again. I have won the single operator multiband class for 10 times in a row (1988-97)! My e-mail address is: [Hannes, OE5JFL](mailto:Hannes.OE5JFL)

SV1BTR

Jimmy writes -- Since my last activity report in the April NL I have worked on 432: **HB9SV, DF3RU, JA3IAF, JA4BLC, 9M2BV, JA2TY, JA9BOH, G3LTF, ON4KNG, OE5EYM, 7M2PDT, K5JL, EA3DXU, EA3UM, S52CW, JA5OVU, W5ZN, W7CNK, and LX1DB** to bring me to initial **#47** and **DXCC 19**. Before the Sept SW my RX side will be completely restructured with the valuable help of PA3CSG. A new KA0RYT cavity preamp will be installed - TNX Ron. Bandpass filters will be added before and after the 1st stage with 10 MHz BW and 0.23 dB insertion loss, and 500 kHz BW with -45 dB at +/- 5 MHz respectively. The 2nd stage will have a high IP of >15 dBm using an Advantec transistor by PA3CSG. Finally a 1 MHz wide 4 pole bandpass filter will be installed before the Yaesu FT-847. This filter works very well with the CW optional Collins filter. These changes should lower system' temperature by at least 30 deg K, but more important the high selectivity filters should significantly decrease IMD. This is the final touch, since I can not bring the preamp closer to the dipoles because of the heavy weight of the masthead box which contains the 2 filters. I am awaiting QSLs from **N4GJV, K4QI, SM2CEW, OH2PO, N2IQU, 9M2BV, EA3UM, W5ZN and W7CNK**.

VE4MA

Barry had good time at the conference, but says Paris was very warm. He is looking for comments on the use of circular pol on 10 GHz -- I want to go circular. The feed is not difficult to make and others in Europe are ready on circular - **SM4DHN, SM6CKU and OK1KIR**. The polarization problem is especially bad for polar mounted dishes. And now that other stations are appearing in all areas of the globe, it makes good sense. Rotatable polarity is a poor alternative. Comments please! In my skeds on 3 cm with PA3CSG, I was off frequency by 10 kHz high (based on listening to Greg and CJO previously). I have a 3.456/1152 GHz oscillator that I use as a "calibrator". In the past I have noted that my 10 GHz and 5.7 GHz stations seem to drift from month to month in the same direction (down).

From the QSOs last month I had a reference which disagreed with my local reference. This time I believed my reference that I had drifted 10 kHz in a month. I was wrong. I went back to work last night to borrow test equipment for 24 GHz, but forgot to bring a counter. I had very poor WX here with light rain and high gusty winds (40 km/h). I could see some moon noise loss during peak winds and could hear my own echoes (M-O) during the time with Geert. Pol errors bother me. I have to manually adjust pol because of my polar mount and I'm not sure that I am setting for "0" offset correctly. I use the Realtrack program and for PA3CSG it was saying +75 deg and with the H/V difference in settings between EU and NA. I offset by +15 deg to make 90, but am not sure that is right? Should it be -15 deg? I reset the pol for AA5C (-22 deg on program) and found Greg easily - a very nice (O) signal and adjusted my freq so my (M) echoes were very close... but no reply. My echoes were not that much down initially, but as the GHA got around to 50 deg, the smear became very bad. As the Doppler dropped I stopped listening to echoes as during TX I don't mute the separate RX and its too hard on the ears. I will try to have my 50 w PA on next time. I have done a lot of maintenance and have resolved a lot of annoying problems, so hopefully operation in the future will be much better. [Barry later worked AA5C for initial #4 on 3 cm.]

W2UHI

Frank worked in Aug on 23 cm **K5JL, KD4LT and WD5AGO** for an initial and heard several others. Later he added OH2DG and a dozen or so others.= He heard WA4NJP at the 25 w level. During the SW he QSO'd K5JL and KD4LT, and later N6BQ and W6HD. Frank is playing on 10 GHz with a 3'dish. He a= sks what Sun noise, CS/G and Moon noise he should see. He has a 2 stage LNA and rcvr running. He is available for 23 cm skeds whenever the Moon is up.

WW2R

Dave (alias G4FRE) is now living in TX, but working all over the place -- Been working in Florida for the last 3 months, but will return on 15 Aug to Dallas. The good news is that the tower is up. (Thanks to G3WDG for coming over the pond to help. I am the only person who can send out an email asking for help putting up a tower and get a positive response from England. I hope to be back on 432 in time for the ARRL EME Contest. The antennas, amp, preamps, etc have resurfaced after my move from San Antonio. The 220 V feed has been installed, so things are looking good.

ZS6AXT

Ivo writes -- After my return from Eur I found my dish intact and equipment working, (7 weeks absence). On Saturday 15 Aug we had heavy winds from a passing cold front. The 0 deg C temperatures were quite a shock after 36 deg C in Eur. On Sunday 16 Aug the WX improved, and I worked on 23 cm **OZ4MM, HB9BBD, HA5SHF (O/O) for initial #137 (random), OZ6OL, K5JL, KB2AH, GW3XYW, G3LTF, W2UHI and N6BQ.** Heard OH2DG. All signals were good with a bit of QSB caused by the wind moving my dish. The Paris EME Conference was good. Thanks to all organizers for their hard work and help! The only negative comments I have is that there was very little time allocated to discussions about operating, contests, etc. And that some EMEers I hoped to meet were missing. Maybe next time.

NET NEWS by G4RGK

K3HZO has finished up his new ham shack is again QRV on 23 cm EME and ready for skeds.

OK1KIR was not QRV in Aug, but will be active in Sept.

K7XD was out of town during the Aug SW, but will be QRV again in Sept.

WD5AGO, Tommy is working on combining two 2 tube amps. His new 23 cm LNA is now all on one board. He promises to write something up for NL soon.

K5WXN is now back from Alaska and back on 70 cm. He worked W7CNK for a new one. He also heard was KR5V.

DL7APV, Bernd is back on 70 cm EME after a long absence with 8 yagis and 750 w from an SSPA.

UT3LL heard K1FO well during their sked, but no QSO resulted.

DL9KR, Jan is back from vacation and looking for sked with K8GP, and a QSL from N7LQ.

W5LUA, Al needs LX1DB on 10 GHz. He hopes to straighten up his tower and maybe get his 24' stress dish back in operation.

EI8IP (IO63) is interested in getting on 432 EME. He is working on a single YL-1050 PA.

K8UC, Curt is building a 25' dish. He needs rotation and elevation suggestions. The dish will weight around 800 lbs.

W0KJY, Jim will get back on 23 cm in near future. He is looking for SV1BTR and K7XD on 432. He is now up to initial #48 on 23 cm where he worked LA8LF, F2TU and W2UHI.

K6IBY will not be fully QRV on 70 cm for another month. He has 300 w and 4 x 24FO yagis running now and no problem hearing, but needs to get his hi-power amp mounted in tower.

KR5V hopes to have 8 x FO25 yagis up in about a month. Four are up now, but he has no polarity rotation. He will be on random and hopes to be more active from now on.

NA4N has been working on a dish. He picked up an 8' section of tower for the mount.

KL7HFQ was on 432 for the SW, but made only one contact with NC1I. He will not be in town for Sept SW.

I5TDJ, Pierro had a great time in Paris at conference. He was receiving 8 dB of Sun noise with 1 yagi on 432.

WA4NJP was on 23 during the SW, but had trouble finding the Moon. He did work W6HD. He was using a 5 m dish and 25 w.

W4HHK is still QRV on 13 cm and looking for new stations to work.

W5ZN is looking for Hawaii on 70 cm. He hopes to have a 15' dish mounted for the contest for 902 and above.

WA9FWD, John has had plenty of rain - 9" in 4 hours. He is still QRV on 23 cm and needs UT on 70 cm.

W7CNK reports 14 dB of Sun noise on 70 cm for a solar flux of 145. He worked K5GW and DL7APV on 432. He is working on 5.7 GHz. He now has 50 w out and hopes to be QRV on 5 GHz in a few weeks. He has also acquired a 300 w 10 GHz TWT and will be working towards getting on 10 GHz.

K9ZZH is awaiting QSLs from K5JL, W5LUA and VE1ALQ.

W7FN, Don still has receiver problems on 70 cm.

K2DH had a lightening strike on 20 July which destroyed almost everything, so Dave is QRT until further notice. He was hard hit and repair will take a long time. He also has a new e-mail address .

WB0TEM has completed most of the repair work to his station and should be back on 220 thru 3456 EME soon.

KA0RYT heard KR5V (KN6M) calling CQ on 432, but no could not raise him.

N2HLT is putting up 8 x FO22s and should be on by the end of month with around 600 w.

VK4KAZ heard W7QX every transmission during their 70 cm sked.

K5JL was on 23 cm during the SW and worked KD4LT - who was moving Jay's S meter to S6, 10 Eur and 3 other NA stations.

FOR SALE

WA4OFS has a **K2RIW amp RF deck** for sale with tubes for \$US325, or without tubes for \$US275. Call Harry at 407-892-5610.

WA8WZG reports that the surplus house that was visited during the last Microwave Update Conference has been in contact with him. They have **TWT power supplies (no TWTs) for RWN-89 and RWN-120 TWTs**. These are for approx 50 w tubes. Call Tom if you are interested.

W4HHK picked up an **HP-432A power meter**. It has a good head, but will not zero. He is **looking for a schematic or guidance as to what to look for**.

KB2AH has a full line of cavity amps and 1, 2, 4 and 6 tube ring amps, lin/circular feed horns and LNAs for 432 and 1296.. Tom also has mounting blocks for K1FO yagis.. For full details see:

Tom's 1296 WEB page at:

[Tom's 1296 WEB page](#)

for more details and pricing info e-mail:

[KB2AH](#)

or phone 908-223-5067, FAX 908-223-0901 (24 hrs) or voice 908-223-8124

TECHNICAL

This month we have an interesting paper by Ian, G1SMD intended for the Paris Conference on attempts to standardize the way dates are represented. This may have more value for computer applications, but it also can cause confusion with reports. I use Eur style for dates in the NL, but will try to adhere to Ian's standard where appropriate in the future.

FINAL

Times change - with the increasing use of e-mail and the WEB, the use of the NA EME BBS has dropped off. The main user of the BBS for NL reports has been K1FO. I have been notified that the EME BBS will go out of business as of 30 Sept because of a lack of interest.

Rein continues to add services to his EME NL WEB page. The latest is a continuous update of the NL EME skeds. He is linked up to Joe and Klaus such that any up-dates to the skeds are immediately listed on his page.

Good luck to Ron, KA0RYT on his Neb dxpedition. We need more of these to keep activity up. Please keep the info coming. I hope to see all off the the Moon during the Sept SW. This is one weekend I don't want to miss!

73, Al - K2UYH



Graphics:

Graphics section will follow, please return..

SEP 11

Time 432.040

2330z EA3DXU-9M2BV

SEP 12

Time	432.035	432.040	432.045
0630z	KA0RYT-DK3WG	W7CNK -EA3DXU	
0700z	KA0RYT-PA3CSG	WB0GGM-EA3DXU	K1OR -DK3FB
0730z	KA0RYT-SV1BTR	K1OR -DL3EAG	
0800z	KA0RYT-DF3RU		K7XD -KU3T
0830z	KA0RYT-G3SEK		
0900z		W7EME -EA3DXU	K7XD -W8MQW
0930z			K7XD -WOKJY
1030z	KA0RYT-K0RZ	N7LQ -EA3DXU	
1100z	KA0RYT-VE1ALQ	PY5ZBU-EA3DXU	

1130z KA0RYT-W1ZX
1200z KA0RYT-KB3PD
1230z KA0RYT-W5ZN
1300z KA0RYT-KD4LT
1500z KA0RYT-WOKJY
1530z KA0RYT-K7XD

1600z KA0RYT-N7LQ
1630z KA0RYT-WA8WZG
1700z K7XD -WD5AGO
2330z VK4KAZ-EA3DXU

SEP 13

Time	432.035	432.040	1296.050
0700z			K3HZO -DF9QX
0730z	KA0RYT-SV1BTR	K7XD -YO2IS	
0800z		K7XD -DK3WG	
0900z		W7KK -DK3WG	N6BQ -9H1ES
0930z			N6BQ -HA5SHF

1100z KA0RYT-K0RZ
1130z KA0RYT-W1ZX
1200z KA0RYT-KB3PD
1230z
1300z
1400z
1500z KA0RYT-WOKJY
1530z KA0RYT-K7XD
1600z KA0RYT-N7LQ
1630z KA0RYT-WA8WZG

W6HD -K3HZO
WA8WZG-K3HZO
W7GBI -K3HZO
K9BCT -K3HZO

A Common Date/Time Standard for Amateur Radio

by Ian Galpin, G1SMD

The representation of Dates, Times, and Time Zones has always caused much confusion around the world. This is especially true in an International activity such as Amateur Radio.

Radio Amateur operators now generally use the 24-hour clock system (rather than the 12-hour am/pm version) and the UTC time zone (rather than Local Time) for skeds, logging, QSL cards, band reports and so on. This helps in the International communication of such data, especially across language barriers.

The way that we write times is defined in an International Standard called ISO 8601. It calls for 24-hour clock, colon ':' separators, and the 'hh:mm:ss' ordering of the time elements. Imagine the chaos if some countries used 'ss:mm:hh' or 'mm:ss:hh' for times! What would a time like

'10:08:04' then mean to different people around the world?

Now consider the situation with dates. The use of the 'dd/mm/yy' date format in some parts of Europe, and 'mm/dd/yy' in America has always caused confusion and ambiguity. A date like '04/08/02' means different things to different people (4th August in UK/Europe, April 8th in the US; in Japan it means August 2nd).

We are also hearing a lot about the so-called 'Year 2000 Problem', which is mainly caused by the use of a two-digit shorthand for the year, instead of using the full four digits. After the end of 1999, there may be confusion with computer programs and in all sorts of other date-related information.

In fixing the 'Year 2000 Problem' there is a good opportunity to deal with the other long-standing problems with date formats. Fortunately, a simple solution to all of these problems already exists in ISO 8601.

The date is written in the order Year-Month-Day. The year is written using four digits. The month and day are written in two-digit format, with a leading zero from '01' to '09'. Optional hyphen separators are used between the various elements.

The ISO format ensures that '2001-02-03' cannot be confused with '03/02/01', '02/03/01', '03/02/2001' or '02/03/2001' as variously written in some parts of Europe and in America.

Some people use the Year-Month-Day order but state the month using either a three-letter English abbreviation or written out in full. The month may even be written in your local language if there will be no problem for the intended readers to understand it.

For example, the new date format writes the date of the 1998 REF/DUBUS 432 MHz EME contest using any of the following fully interchangeable ways:

19980308	(all digit, no separator)
1998-03-08	(all digit, hyphen separator)
1998-Mar-08	(short format for month)
1998-March-08	(full name of month)

We are already using the ISO 8601 method for time. The proposal is simply to write our dates in the same logical way, with the largest units first: Year-Month-Day and then Hour:Minute:Second.

We all understand the time '22:44:59'. There should be no problem with a date like '2002-04-08', whereas a date like '08/04/02' has at least six different interpretations around the world.

The ISO 8601 date format has already been officially adopted by most countries of the world. In Europe, every member state is bound by the CEN regulations to implement EuroNorm EN 28601, which has the same wording as ISO 8601. In the USA see the ANSI X3.30 standard. The ANSI standard is also recommended by NIST and IBM. In Japan refer to the JIS X 0301 document. The ISO 8601 date format has already been in daily use in Scandinavia, parts of Eastern Europe, and most of the Far-East (Asia) for many years.

It will find usage in computer programs, log-books, contest entries, QSL cards, magazine reports, email and many other places. The new format has already been adopted by many organisations. Astronomers have been using this method for over 200 years.

In Amateur Radio the proposal is already supported by: G3RZV, G6CGQ, GM4ANB, DL4EBY, DL8LAQ, G3XWH, G3RUH, G4NJH, G8IQU, HB9MAO, AA7BQ, N3EQF, KP2BL, WN4AZY, W1UD, W3IS, G8EXV, G0RUR, GM3JZK, G4IFB, N0ED (G3SQX), G3SEK, G0CUZ, G7LFC, 9M2CR, OH5IY, DL5BCU, G3TZO, G3OAF, G0BAF, VK3UM, G3NKS, G3PHO, K2UYH, W6/PA0ZN, EA2LU, K7BV, WA1LOU, and many others.

Notes:

- (1) An Introduction to using ISO 8601 in Amateur Radio can be found at: - [\(1\)](#)
- (2) A general Proposal Document for Amateur Radio can be found at: - [\(2\)](#)
- (3) Instructions on how to set up computers to use the ISO 8601 format: - [\(3\)](#)
- (4) A short summary of the ISO 8601 Date Format can be found at: - [\(4\)](#)
- (5) A complete description of the ISO 8601 Standard can be found at: - [\(5\)](#)
- (6) Background notes on the Year 2000 Problem can be found at: - [\(6\)](#)
- (7) A list of the Countries that have adopted the ISO 8601 standard: - [\(7\)](#)

Other Internet Sites of Interest:

- [I](#)
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My own Web Page with much more Year 2000 and ISO 8601 information is at:

- [Year 2000 and ISO 8601](#)

- mirror site:

- [G1SMD Mirror Site](#)

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